

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/045,799

~~17. The vehicle generator according to claim 15, wherein said insulating member is provided with an engaging portion that engages a portion to be engaged which is formed in a discrete wire.~~

18. The vehicle generator according to claim 17, wherein said discrete wire is included in said brush holder.

19. The vehicle generator according to claim 17, wherein said discrete wire is a connector terminal of said brush holder.

20. The vehicle generator according to claim 15, wherein said insulating member is composed of polyphenylene sulfide resin.

IN THE TITLE:

Amend the Title of the Invention to read as follows:

-- INSERT CONDUCTOR FOR USE IN A GENERATOR AND HAVING
STRUCTURE FOR PREVENTING DEFORMATION --

REMARKS

Reconsideration and further examination of the application are hereby requested. Claims 1-6 and 9-20 are all the claims pending in the application.

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The provisional telephone election of the invention of Group I (i.e., the article claims 1-6) is hereby affirmed. Claims 7 and 8, directed to the non-elected method, have been canceled without prejudice.

Applicant appreciates the Examiner's acknowledgement of the claim to priority under 35 U.S.C. § 119, as well as receipt of the certified copy of the priority document.

A. The Obviousness Rejection of Claims 1-4

Claims 1-4 have been rejected under 35 U.S.C. § 103(a) as being obvious over Byrne (U.S.P. 3,544,857) in view of Nakazawa (U.S.P. 5,648,682). This rejection is respectfully traversed based on the following arguments.

Independent claim 1 recites

a deformation preventer which is provided on said conductor such that the deformation preventer extends over said wires and which prevents the conductor from being deformed by a resin injection pressure applied during insert resin molding.

However, this limitation is not taught or suggested by the prior art.

The Examiner contends that Byrne discloses a plurality of wires (17), an outer frame (18), connections (17b), and an insulating member (13) which supports the plurality of wires in an encapsulated body (26). The Examiner contends that the insulating member (13) inherently helps prevent deformation of wires (17) during encapsulation in the encapsulated body.

However, the insulating member (13) is taught by Byrne to be formed of a sheet (21) of a suitable insulating material, preferably, KAPTON (TM) polyamide film. The film is particularly desirable because it is relatively dimensionally stable under changes in temperature, is capable of

withstanding relatively high temperatures from 250° to 500° C, and can be formed on a copper foil. The copper foil is etched away to form leads 22 which are supported on the film (13). Thus, the plastic plate (13) shown in Fig. 3 of Byrne is taught to be formed of a thin film.

The insulating member (13) is not suitable reinforcement to prevent the wires (17) from being deformed by a resin injection pressure applied during insert resin molding because the insulating member (13) is formed of a plastic film which is relatively thin. No person of ordinary skill in the art would interpret the thin film insulating member (13) taught by Byrne as providing any meaningful added mechanical strength for the wires 17. Thus, Byrne does not teach a deformation preventer, which Applicants have claimed.

In fact, it is quite clear that Byrne does not suggest strengthening of the wires (17) because the insulating film (13) would probably serve to cause increased deformation of the wires (17) during injection molding. That is because fluid pressure across the broad surface area of the insulating film (13) would be transferred to the wires (17) which have a relatively smaller surface area for the fluid pressure of injected resin to act on.

The Examiner contends that Nakazawa teaches an insert conductor which is encapsulated by resin insert molding. However, Nakazawa shows nothing relevant to the claimed deformation preventer limitation.

Thus, considered together Byrne and Nakazawa do not teach or suggest the combination of elements recited in Applicants' claim 1. For this reason, Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness with respect to claims 1-4.

B. The Obviousness Rejections of Claims 5 and 6

Dependent claim 5 has been rejected under 35 U.S.C. § 103(a) as being obvious over Byrne in view of Nakazawa and Huber (U.S.P. 4,845,396). Dependent claim 6 has been rejected under 35 U.S.C. § 103(a) as being obvious over Byrne in view of Nakazawa and Yoshida (Japanese Kokai no. 4-34995). These rejections are respectfully traversed based on the following arguments.

Claims 5 and 6 each depend from independent claim 1, and thus, incorporate by reference the above-noted "deformation preventer" limitation recited therein. As explained above, the combination of Byrne and Nakazawa does not teach or suggest the this limitation.

When Huber is added to the combination, no suggestion of a deformation preventer structure arises. The Examiner has cited Huber only for its teaching that an insert conductor may be injection molded inside a brush holder.

When Yoshida is added to the combination, no suggestion of a deformation preventer structure arises. The Examiner has cited Yoshida only for its teaching of the particular material polyphenylene sulfide resin.

Thus, Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness with respect to claims 5 and 6.

C. The New Claims

New independent claims 9 and 15 each recite an "insulating member" which prevents deformation of the recited conductor. Thus, new claims 9-20 define over the prior art for reasons similar to those set forth with regard to claims 1-4, above.

With regard to claims 9 and 15, which are directed to a vehicle generator, the Byrne, Nakazawa, and Yoshida references are non-analogous art, and thus, are not appropriate for consideration in an obviousness rejection. Byrne and Nakazawa are both directed to integrated circuit packaging methods. Yoshida is directed to a multilevel wiring board. Thus, these references are all from fields of endeavor which are diverse from that of the claimed vehicle generator. Additionally, none of these references is directed toward solving the same problem which Applicants faced in developing the present invention. Accordingly, Byrne, Nakazawa, and Yoshida are not appropriate for an obviousness analysis of claims 11-18 and 27-34.

D. Formal Matters

The Examiner has objected to the Title of the Invention as not being sufficiently descriptive of the claimed invention. Applicant believes this objection is overcome by the above amendment.

The Examiner has also objected to the drawings on the basis that Figs. 8-17 should be labeled as "Prior Art." A Proposed Drawing Correction is filed herewith as a separate paper, to add "Prior Art" labels to Figs. 8-17. The Examiner is respectfully requested to approve the proposed drawing changes.

E. Conclusion

For the above reasons, Applicant respectfully submits that independent claims 1, 9, and 15 are patentable over the prior art of record. Applicant further submits that claims 2-6, 10-14,

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and 16-20 are patentable as being dependent from a patentable independent claim, and are further patentable due to the additional limitations recited therein.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance with claims 1-6 and 9-20, and such action is hereby solicited. If any points remain an issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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